

SOM and UKHCA

Position Statement on the implementation of HSE Noise Health Surveillance Guidance

May 2023



EXECUTIVE SUMMARY

- The requirements and standards for noise health surveillance are outlined by the Control of Noise at Work Regulations 2005 (Noise Regs) and in the HSE Guidance L108.
- Competence in undertaking noise health surveillance is covered by occupational health (OH) training and attendance at a BSA approved training course, and doctors' competence is covered by their OH training. The Society of Occupational Medicine (SOM) & UK Hearing Conservation Association (UKHCA) consider there is a potential issue with consistency and competency in health surveillance of noise exposed workers which requires further exploration and development.
- Health surveillance for noise is not considered a diagnostic methodology and the approach aims to provide information and evidence on indications that harm has been caused by exposure to noise at work which will be evaluated by a competent person.
- Where Noise Induced Hearing Loss (NIHL) is suspected, this determination will first be identified by a competent OH professional or advisor by review of a number of information sources including interpretation of the audiogram, alongside the HSE categorisation scheme calculations and comparison with previous audiograms.
- Where the competent OH professional judges that there are indications of newly identified, rapid progression or progressive NIHL then they must make a referral to an appropriately qualified doctor (i.e. an OH physician).
- The competent OH professional may wish to undertake further re-tests or seek further information before referral to a doctor takes place.
- This means that referral doesn't have to happen at every point of health surveillance where NIHL is indicated but when first identified or where there is rapid change or progression.
- The referral can happen virtually or be a 'paper' review exercise rather than requiring face to face examination. The essential requirement is for the doctor to have all relevant information available to them to make a judgement alongside appropriate competence to make a judgement.
- When an individual is referred to the appropriately qualified doctor, they should review the recommendation and information from the OH professional to make an overall judgement on fitness for continued exposure in order to go back to the employer (as part of the health record).
- Where hearing damage is found to be as a result of noise exposure, this will trigger specific duties on the employer as per Reg 9(4) of the Control of Noise at Work Regulations.
- Where there are no clear indications of NIHL that require referral to an appropriately qualified doctor then the competent OH professional can make the judgement and recommendation on fitness for continued exposure.
- The referral process should not preclude individual coaching and advice from the OH professional or in providing grouped anonymised feedback to the employer for risk management purposes whilst awaiting a fitness for continued exposure judgement from the doctor.
- Changes to the guidance have highlighted concerns and limitations with the current HSE categorisation scheme which require further exploration and review.
- The SOM, alongside the UKHCA, will look to gather data and evidence to support future changes and improvements to noise health surveillance. We will work closely with HSE to review the competency requirements for a robust noise health surveillance programme and look to develop a new syllabus appropriate to the roles involved.

BACKGROUND

In 2021 the HSE made changes to Guidance contained in L108 for the Control of Noise at Work Regulations 2005. This included changes to the advice provided to health professionals for Noise Health Surveillance in Appendix 4, namely:

- **Para 21:** Where, as a result of health surveillance, the employee has identifiable hearing loss, the diagnosis of NIHL must be confirmed by a doctor (unless the competent adviser is a doctor). Fitness for work advice should then be provided by the competent adviser.
- **Table 12:** A new column was added to require 'NIHL seen on audiogram?'
- **Para 24:** Firstly, the audiogram should be assessed for the possible presence of NIHL. This should be undertaken by an appropriately qualified individual, e.g. an OH professional. Where NIHL is newly identified or progressive, the worker should be placed in Category 3 and be referred for medical assessment by an appropriately trained doctor, e.g. occupational physician.

IMPACT

The changes immediately raised questions for clarification from HSE on what 'NIHL seen on an audiogram' means and how this would be judged.

The requirement for referral to a doctor, associated with re-categorisation, is a key change which creates a significant challenge. Anecdotally, this is producing an increase of over 300% in referrals to OH physicians, which has overwhelmed an already limited resource and is proving a costly addition to noise health surveillance programmes.

Questions are also raised about what 'an appropriately qualified individual or appropriately trained doctor' means, and whether current available training and qualifications actually provide sufficient knowledge and skills in order for OH professionals to make confident judgements on indications of NIHL.

AGREED POSITION ON IMPLEMENTATION OF CURRENT GUIDANCE IN L108

The following advice aims to provide further clarification on the above points raised.

'Diagnosis' of Noise Induced Hearing Loss (NIHL)

Health surveillance for noise is not considered a diagnostic methodology and the approach aims to provide information and evidence on indications that harm has been caused by exposure to noise at work which will be evaluated by a competent person. The process must include appropriate feedback to the employer.

The judgement that NIHL is likely must be made by a doctor. Therefore, although paragraph 21 in HSE's guidance refers to 'diagnosis of NIHL ... by a doctor', what this means in practice is that the professional judgement of the competent doctor should decide whether they consider, from the information that they are presented with, that any harm on balance is predominantly caused or impacted by exposure to noise in the workplace.

Initial judgement of indications of NIHL and exclusion of other potential causes made by the competent occupational health (OH) professional should be based on a number of information sources. Some key ones will be:

- Self-reported hearing issues including difficulty hearing in background (diplacusis and temporal issues), tinnitus, hyperacusis and recruitment.
- Practitioners should explore any problems with hearing or hyperacusis, and any reports of tinnitus.
- Individual medical history relevant to hearing and balance (particularly head injury) **and relevant family history**.
- Noise exposure history i.e. regular exposure above 82dB LEPD. To diagnose NIHL it is important to elicit a detailed and accurate history of exposure to noise.
- Effectiveness of controls (particularly if reliance on hearing protection).
- Exposure to ototoxic substances at work or ototoxic medication (such as previous use of aminoglycoside antibiotics).

- Personal sound and noise exposure through listening and leisure activities.
- Previous and current audiogram results.
- Otoscopy.

Appendix 5 of L140 provides an example noise and health questionnaire.

Appendix A to this document provides an abbreviated version of the American College of Occupational and Environmental Medicine's (ACOEM's) agreed principal characteristics of NIHL.

[Link: Occupational Noise Induced Hearing Loss.pdf \(acoem.org\)](#)

NIHL seen on an audiogram

A key change to the guidance is a specific requirement as part of categorisation, for the audiogram to be assessed by an appropriately qualified individual for the possible presence of NIHL.

As part of reviewing an audiogram for NIHL a key feature is often described as a 'notch' or dip in the trace – typically seen around 4kHz. Guidance taken from the US OSHA in this area, state that a 'notch' would be to observe an increase of 10dB when compared to baseline at frequencies 2, 3, 4 or 6kHz. Where there is no previous audiogram result for comparison, the advice is to take the 'baseline' thresholds at 1kHz and below and see an increase of 10dB+ in high frequencies (2, 3, 4 or 6kHz) with recovery at 8kHz - appearing as a 'notch'. OSHA describe a Standard threshold shift as a change in hearing threshold relative to the baseline audiogram of an average of 10dB or more at 2000, 3000, and 4000 Hz in either ear.

[Link: 1910.95 - Occupational noise exposure. | Occupational Safety and Health Administration \(osha.gov\)](#)

The OSHA guidance is provided as one of the simplest rules to follow in this area. However, there are other rules and advice available. The SOM and UKHCA continue to review the other possible approaches and will provide a more detailed overview in due course.

Referral to a doctor

Where NIHL is newly identified or progressive, the worker should be placed in Category 3 and be referred for 'medical assessment' which we clarify as judgement for indication of NIHL, by an appropriately trained doctor, e.g. occupational physician.

The frequency of any subsequent testing or further oversight by a doctor will be defined by the nature and progression of any abnormalities found and on recommendation from the doctor.

Following first referral for new or progressing loss there may be no need for further referral at subsequent tests if the NIHL becomes stable. As long as the individual with NIHL has been seen in respect of their possible NIHL as part of a noise health surveillance programme, whether with current employer or with advice/health records from previous employer, further tests can progress under advice from the competent OH provider, including fitness to work in a noise exposed environment.

Referral for other conditions not considered to be NIHL

If unilateral loss is found the OH provider will need to consider if this is likely to be occupationally related. In most cases this will not be but should be referred in the first instance for medical investigation to exclude potentially serious and treatable acoustic neuroma. If an organic cause is excluded only then should a consideration be given to noise as a cause.

It is also likely that hearing loss from age or non-occupationally related sources or other hearing health conditions may be picked up during health surveillance. These do not need to go to the occupational physician but can be referred via the GP/NHS routes.

Competency of those involved in Noise Health Surveillance

The success of the programme will rely on the competency of those involved to be able to:

- judge and determine the indications of both noise and non noise-induced hearing health conditions
- subsequently to direct for further appropriate health support or formal identification of NIHL
- coach and advise individuals on hearing health protection and prevention of harm whether this is detected, suspected or as precautionary advice

Currently, an appropriate level of competency is assumed based on OH training and ongoing CPD, and for those conducting the test via British Society of Audiology (BSA) approved courses.

Guidance for employers on OH competencies can be found here:

Link: [Occupational health - Assess the competence of occupational health professionals \(hse.gov.uk\)](https://www.hse.gov.uk/occupational-health/assess-competence-occupational-health-professionals/)

The current BSA courses and the requirements laid out by HSE in L108 focus predominantly on the procedural and quality elements of the test rather than the interpretation and understanding of the results.

The SOM and UKHCA recognise that this is unlikely to be providing a consistent and sufficient level of competency in many cases.

The SOM and UKHCA will work closely with HSE to review the competency requirements for a robust noise health surveillance programme and look to develop a new syllabus appropriate to the roles involved.

OTHER OBSERVATIONS AND RECOMMENDATIONS

The issue of competency needs to be resolved and is unclear and unhelpful in providing a consistent and clear level of knowledge required for those involved in noise health surveillance.

Reflection and consultation on the recent changes have highlighted again the serious failings and lack of suitability of the current HSE categorisation scheme. We feel this now needs to be prioritised by the HSE to find a suitable replacement to bring it up to date with the current profile of hearing health in the GB population and also to ensure that it actually does as it is intended – to identify those with NIHL at an early stage to allow for intervention and support.

The SOM and the UKHCA would like to see ongoing improvements made to the guidance for NIHL – specifically to bring it in line with other health surveillance guidance such as that for Hand Arm Vibration.

There are opportunities to produce a tiered approach alongside a specific syllabus for a NIHL Health Surveillance, as with the FOM accredited course which provides definitive demonstration of ‘competence’.

There is also a discrepancy with noise health surveillance in that we would very rarely expect to see a doctor/physician requesting individuals are removed from noise exposure due to the impact and deterioration of their hearing health. This may require further guidance and advice for professionals to ensure workers’ hearing is protected from ongoing impact and irreversible damage whether in addition to work causation or otherwise.

Some specific contradictions within the current guidance need rectifying:

- Terminology for roles - competent advisor (suitably qualified occupational health professional), qualified individual, appropriately qualified individual, e.g. an occupational health professional - could be simplified.
- Clarification in the guidance that referral to a doctor is for judgement on *indications* of NIHL, not *diagnosis* (which would be a specific process following the published CLB guidelines predominantly used for medico-legal diagnosis).
- Clarification that referral for judgement on NIHL for the fitness for continued exposure in noise should be to an occupational physician, versus referral into the NHS via the GP for follow up on age-related or leisure caused hearing loss or other non noise-related hearing conditions (the terms medical assessment and medical advice are used in different parts of the guidance, along with the term diagnosis).
- Clarification that the fitness judgement is made by the doctor not the competent advisor. See para 39 (in exceptional circumstances the competent adviser may indicate to the employer that an individual is no longer fit for their current role) and part 5 (the competent adviser will also advise you on fitness to work with noise on the basis of the doctor’s or specialist’s view, where appropriate).
- Inclusion of noise-induced tinnitus in the evaluation of harm.

APPENDIX A: ACOEM STATEMENT ON NIHL CHARACTERISTICS

1. It is always sensorineural, primarily affecting the cochlear hair cells in the inner ear.
2. It is typically bilateral, since most noise exposures affect both ears symmetrically.
3. Its first sign is a 'notching' of the audiogram at the frequencies of 3000, 4000, or 6000 Hz with recovery at 8000 Hz.
 - i. This notch typically develops at one of these frequencies and affects adjacent frequencies with continued noise exposure. This, together with the effects of aging, may reduce the prominence of the 'notch'. Therefore, in older individuals, the effects of noise may be difficult to distinguish from age-related hearing loss (presbycusis) without access to previous audiograms.
 - ii. The exact location of the notch depends on multiple factors including the frequency of the damaging noise and size of the ear canal.
 - iii. In early NIHL, average hearing thresholds at the lower frequencies of 500, 1000, and 2000 Hz are better than average thresholds at 3000, 4000, and 6000 Hz, and the hearing level at 8000 Hz is usually better than the deepest part of the notch.
 - iv. This notching is in contrast to presbycusis, which also produces high frequency hearing loss but in a down-sloping pattern without recovery at 8000 Hz.
 - v. Although HSE does not require audiometric testing at 8000 Hz, inclusion of this frequency is highly recommended to assist in the identification of the noise notch as well as age-related hearing loss.
4. Noise exposure alone usually does not produce a loss greater than 75 dB in high frequencies and greater than 40 dB in lower frequencies. Nevertheless, individuals with non-NIHL, such as presbycusis, may have hearing threshold levels in excess of these values.
5. Hearing loss due to continuous or intermittent noise exposure increases most rapidly during the first 10 to 15 years of exposure, and the rate of hearing loss then decelerates as the hearing threshold increases. This is in contrast to age related loss, which accelerates over time.
6. Although the HSE second action level for noise exposure is 85 dB (8-hour time-weighted average), evidence suggests that noise exposure from 80 to 85 dB may contribute to hearing loss in individuals who are unusually susceptible. The risk of NIHL increases with long-term noise exposures above 80 dB and increases significantly as exposures rise above 85 dB.
7. The presence of a temporary threshold shift (i.e. the temporary loss of hearing, which largely disappears 16 to 48 hours after exposure to loud noise) with or without tinnitus is a risk indicator that permanent NIHL will likely occur if hazardous noise exposure continues.

